

Massachusetts Drought Management Task Force – Meeting Summary

November 8, 2016, 100 Cambridge Street, 2nd floor, Room B

Attendees:

Vandana Rao, EEA	Alan Dunham, NWS	Jennifer Pederson, MWWA
Nicole Belk, NWS	Gardner Bent, USGS	Adam Kautza, DFW
Serafina Zeringo, Office of Rep. Schmid	Vanessa Curran, DCR	Pine duBois, JRWA
Duane LeVangie, MassDEP	Michael Celona, DPH	Anne Carroll, DCR
Greg Lane, Aquarian Water	Michelle Craddock, DFG/DER	Sarah Bursky, NPS
Kurt Schwartz, MEMA	John Lebeaux, MDAR	Julia Blatt, Mass Rivers Alliance
Gabby Queenan, Mass Rivers Alliance	Beth Card, MassDEP	Erin Graham, DCR
Viki Zoltay, DCR	Kate Adams, DPH	Richard Verdi, USGS
Margaret Van Deusen, CRWA	Jonathan Yeo, DCR	John Gregoire, MWRA
Ivey St. John, Charlestown Coalition	Lexi Dewey, WSCAC	

Introductions and Update on Drought Response Actions

- Rao and Schwartz called the meeting to order at 9:18 am.
- The minutes of October 5, 2016 were adopted.
- EEA has been coordinating with agencies on what they have been hearing and current conditions. As the irrigation and growing season is tapering off there aren't as many calls for assistance. EEA is continuing to tweet and provide guidance.
- Meeting attendees were asked to introduce themselves. MDAR Commissioner Lebeaux was recognized.

Updates on Current Conditions and Impacts from Members of the Task Force

Current Hydrologic Conditions - DCR Office of Water Resources, Anne Carroll and Viki Zoltay

- Precipitation Percent of Normal and SPI: October precipitation numbers were good overall. The Connecticut River region received below normal precipitation. The SPI and Percent of Normal indicators are not lining up with each other. The SPI is at Advisory for the Connecticut River, Central, Northeast, and Cape & Islands. The Percent of Normal Index is in the Normal range for all regions except the Connecticut River region which is at Watch (based on the 6-month value).
- Reservoirs: the worst conditions that have been seen so far. Two reservoirs are 2 standard deviations below normal in the Northeast, which is at the Warning level. The Western, Connecticut River, Central, and Southeast regions are at the Watch level.
- Streamflow: With the October rainfall the Northeast region is averaging out to above normal. There has been periodic relief with the rain but the drought is still evident. All regions are in Warning except for Central which has reached Emergency status. Many gages are below the 10th percentile. The revisions of the drought plan will intend to address severity, not just duration.
- Groundwater: As of November 4th, the real-time wells are showing a spotty recovery. Based on number of consecutive months below normal, all regions are in Warning, except for the Cape which is Normal and the Western region which is at Emergency. As groundwater impacts are delayed, the worst conditions might not have occurred yet. There are a lot of record lows. The drought plan considers length of low levels and not severity.

- Crop Moisture Index: is at normal across the state.
- Keetch-Byram Drought Index: The Southeast and Cape & Islands have recovered to normal. All other regions are at Advisory.
- The U.S. Drought Monitor showed the drought retreating slightly to the Northeast.

Streamflow and Groundwater Conditions in Massachusetts- USGS, Richard Verdi

- Streamflow has had some recovery over the past few months but overall is still below normal.
- Representative rivers in Massachusetts
 - the Wading River near Norton – record low flows last month
 - Charles River @ Dover – also record lows last month
 - the Ipswich – conditions are bad
 - West Branch – not record low but low compared to this time of year in the last couple of years
- Groundwater conditions: looking at the period from June to October, levels have not recovered.
- There was a question on Cape Cod wells, particularly one that has been consistently high. The well in question has been affected by pumping in the past so its statistics are skewed. There are also some deeper wells on the Cape, and the Outer Cape received slightly more rain.
- For the future, the depth of wells should be taken into consideration; shallow wells recover more quickly but also drop off faster.

Weather- National Weather Service Update, Alan Dunham

- The 30 day percent of normal: Some parts of Worcester and Middlesex Counties got 6-7 inches of rain but very little west of the Worcester Hills. For 60- and 90-day percent of normal: parts of Essex, Middlesex, and the Cape exceeded typical amounts but other areas did not improve.
- The October rainfall was good, but came down quickly and much of it ran off. It was a one-month blip.
- 2016 percent of normal: The Connecticut Valley is about 50-60% of normal, the whole state is still below normal.
- The Palmer drought index as of 10/29/16 is looking good.
- The Drought Monitor from November 1: Dunham suggested that more of the Connecticut Valley should be red.
- Streamflow went up quickly and decreased quickly.
- The 8-14 day outlook has a high percentage of models showing above normal precipitation. Both the November outlook and the Nov-Jan outlook show equal chances for above or below normal precipitation.
- The Drought outlook for November through January shows the drought persisting.

Water Supply

Massachusetts Department of Environmental Protection – Beth Card

- DEP has been working closely with water suppliers, who have been following permit requirements. There is very good compliance and systems are going above and beyond. DEP strongly encouraged water bans after September.
- A handful of systems are under emergency declarations. Suppliers may need to use alternate sources or draw more from their existing sources.

Massachusetts Department of Environmental Protection – Duane LeVangie

- At the October meeting there were 5 systems with emergency declarations; there are now 6 (Cherry Valley added). They are buying from Worcester, who is buying from MWRA. This is not all drought-related; there are some water quality issues as well.
 - Plymouth – terminated declaration due to reduced demand (harvest is over)
 - Foxborough – used Witch Pond wells a few times
 - Ashland – bought water from MWRA
 - Burlington – bought from MWRA through Lexington, levels are up so can likely cease
 - Ipswich – reservoir is coming back up
- In response to a question whether DEP was looking at Drought Management Plans for reservoirs, Levangie replied that not all of them have drought plans.
- In response to a question whether DEP has looked at the firm yield of reservoirs, Levangie replied that they had not, and no one has run out of water. It would need to be looked at.
- There was a suggestion that the City of Boston should be asked to reduce irrigation to preserve reservoirs that serve Boston and other communities who might need water.

Massachusetts Water Resources Authority, John Gregoire

- Demand for water in Boston is the same as it was 100 years ago.
- The Quabbin is approximately 80% full - about a 4.9 year supply. Levels are hovering just above normal. Expected to be below normal by the end of the week.
- Wachusett Reservoir is kept in its operating range by transferring water from the Quabbin.
- The Sudbury system is back into normal range with recent rainfall.
- Not doing winter drawdowns for control of invasives at Chestnut, Foss, Shaft 8 Intake in Ware

Massachusetts Water Works Association, Jennifer Pederson

- March meeting of MWWA will focus on drought, Worcester will present.
- Concern about keeping water bans in place – desensitization of message.

There was no representative from the Department of Public Utilities.

Environmental

Department of Fish and Game- Fisheries, Adam Kautza

- Landlocked Atlantic Salmon are cued to respond to rainfall. Many got trapped in upper head waters and died. The run has not been good. The flow is not there to cue the salmon.
- Issues with stocking. 4 of 5 hatcheries are in the Connecticut Valley. There isn't enough water to raise as many fish as normal. The surplus fish have to be stocked because there is not enough room to keep them in the hatcheries. Anglers have complained.

Department of Fish and Game- Division of Ecological Restoration, Michelle Craddock

- Some small streams are recovering, some are still very low to dry. Herring Brook is dry because reservoir releases have ceased. Jones River is dry below the dam outlet structure.
- Marine Fisheries is monitoring the herring out-migration.

- In the Southeast region there were issues with the cranberry harvest and out-migration. As the harvest occurred later than usual, fry were sucked up along with water.

WSCAC – Lexi Dewey

- There are problems with habitat due to drought. In Sunderland, unable to stock fish because levels were too low.
- Communities west of the Quabbin need help.
- Can the Task Force look into the issue of private wells going dry?

Agricultural- Department of Agricultural Resources, Commissioner Lebeaux

- The cranberry harvest is ending. Schedule had to be adjusted according to water availability. By most reports, growers were able to squeak by with a sufficient harvest. There is a concern about being able to flood bogs for winter protection.
- Livestock still need water. Reports of wells going dry in Bristol County.
- The dairy industry needs additional water for cleaning processes. Greenhouses need water too.
- Two types of grants awarded for assistance
 - Livestock forage protection program
 - Tree assistance – for orchards and perennial crops
- Overall negative impact to MA agriculture, there is a huge concern about 2017
- Didn't get much participation in loan program.
- Zerino commented that farmers don't want to take on any more loans, they will need loans in spring so don't want to take on additional loan now.

DCR Fire Danger and Infrastructure, Jonathan Yeo

- Conditions have improved to the point that prescribed burnings have resumed.
- The Charles River continues to be low.

Public Health- Department of Public Health, Michael Celona

- DPH has not received any reports of private wells going dry.
- Having discussions on additional efforts to reach out to local boards of health.

Discussion of Drought Level Recommendations

- West Region: Current level is Watch. There was debate about whether to remain at Watch or increase to Warning. Groundwater reached Emergency status. 4 of the 5 wells are way below normal (3 below 10% of normal and 1 at a record low). 1 of 2 reservoirs is below normal. It was proposed to move to Warning. Two members disagreed based on the limited data and advocated for staying at Watch for the time being. Rao will relay the discussion regarding Watch/Warning to Secretary Beaton.
- Connecticut River Valley Region: Current level is Warning. Recommendation: Remain at Warning.
- Central Region: Current level is Warning. Precipitation improved slightly. Recommendation: Remain at Warning.
- Northeast: Current level is Warning. Recommendation: Remain at Warning.
- Southeast Region: Current level is Warning. Recommendation: Remain at Warning.

- It was suggested that at next month's meeting, to provide the previous drought level in the table of drought indicators. It was also suggested that for the drought plan revision to consider breaking up regions to take into account differences in northern and southern areas.
- Cape Cod & Islands Region: Current level is Watch. Conditions improved over the last month. Recommendation: drop from Watch to Advisory.
- There was consensus on all regions except West. All are at Warning except the Cape & Islands which is proposed to go to Advisory. West will be at Watch or Warning. Secretary Beaton will be presented with the information and discussion.

Recommendations for Drought Level Response Actions

- Attendees have been asked to review the Drought Management Plan and provide specific feedback on what changes they would like to see in the plan. Specifically in the two broad categories of preparing better before droughts and what actions can be taken to quickly decrease non-essential water use when a drought begins.
- Thoughts should be sent to Rao.
- Timeline for revision is over the next 6-9 months.

The meeting was adjourned at 11:25 am.